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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,116	09/26/2003	Eiichi Komai	9281-4686	7767
7590 08/23/2004				
Brinks Hofer Gilson & Lione P.O. Box 10395 Chicago, IL 60610			EXAMINER JONES, STEPHEN E	
			ART UNIT 2817	PAPER NUMBER

DATE MAILED: 08/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/672,116	<b>Applicant(s)</b> KOMAI, EIICHI	
	<b>Examiner</b> Stephen E. Jones	<b>Art Unit</b> 2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/26/03</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 1-5 are objected to because of the following informalities:

Regarding Claim 1 (lines 2, 5, 7, 10, and 12), Claim 2 (line 3), Claim 3 (line 2), Claim 4 (line 4), and Claim 5 (lines 6-7), the phrase "plate-like magnetic material" is confusing since term "like" is vague. It appears that the phrase would be more clear if it instead read as --plate magnetic material--.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2 and 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Horio et al.

Horio (e.g. Fig. 2-3) teaches a nonreciprocal device including: a common electrode (30) on the bottom surface of a magnetic plate (34); three central conductors protrude from the common electrode and fold around the ferrite; input/output conductors (31 and 32) are arranged such that one is directly on the ferrite (which can be the input conductor) and the other is on an insulating layer (35) over the input/output such that they cross at a chosen angle (Claims 1-2 and 4); the third conductor is connected to a capacitor and resistive termination; the conductors are connected to capacitors for

providing matching (Claim 6); a rectangular parallelepiped iron based casing (28, 16) (i.e. a soft magnetic material forming a yoke); and the conductors overlap (i.e. intersect) about 1/3 of their length of the portion which is on the top of the ferrite (e.g. see Fig. 2) (Claim 5).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horio et al.

Horio teaches a nonreciprocal device as described above. Horio also teaches that isolators are conventionally used to connect between a power amplifier of a transmission circuit and an antenna (e.g. see Col. 1, lines 18-24).

It would have been considered obvious to one ordinary skill in the art to have connected the input conductor to a transmitting circuit (i.e. an input circuit) and the output conductor to an antenna, especially since Horio teaches that it is conventional to connect an isolator between a transmission circuit and an antenna and since both are input/output circuit devices and it would have provided the advantageous benefit of preventing unnecessary signals being returned to the amplifier (e.g. see Col. 1, lines 18-24).

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horio et al. in view of Takane et al.

Horio teaches a nonreciprocal device as described above. However, Horio does not explicitly teach that the sides of the yoke are 4mm or less.

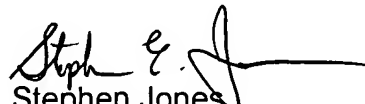
Takane teaches that it is conventional to make an isolator having a thickness of about 3mm (e.g. see Col. 2, lines 6-9).

Accordingly it would have been considered obvious to one of ordinary skill in the art to have made the Horio device to have sides less than 4mm, especially since Takane teaches that conventional circulators are about 3mm in thickness which provides the advantageous benefit of a miniaturized device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen E. Jones whose telephone number is 571-272-1762. The examiner can normally be reached on Monday through Friday from 8 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Stephen Jones  
Patent Examiner  
Art Unit 2817

SEJ